

# LEAN 101

Identifying Wastes &  
Applying Lean Concepts

## Lean 101 - The Eight Wastes

### Lean = Eliminating the 8 Wastes

Waste within a process is a systemic flaw. Waste is using resources – be it labor, materials, or equipment – over and above what is required to produce the service or product defined by our customers. Ultimately, if our customer/client does not need or would not pay for it, it is waste. It is of no value to the customer/client.

Recognizing waste leads to identifying the root cause of problems. All non-valued activity can be categorized into the 8 wastes below. Examples are given for each category.

#### ◆ **Overproduction**

- Overproduction and early production – producing more than the customer has asked for or providing unordered materials/products/services
  - Generating more information than the customer needs right
  - Generating more information than the next process needs
  - Providing a service the customer is not ready for/unable to use at this time
  - Creating reports that no one reads
  - Making extra copies
  - Duplicate data sources

#### ◆ **Waiting**

- Idle time created when material, information, people, or equipment is not ready – time when no value is added to the product/service.
  - Waiting for the system to come back up
  - Waiting for a handed-off file to come back
  - Waiting for customer response
  - Waiting for copy machine
  - Waiting for faxes
  - Waiting for reviews or approvals
  - Excessive Login or response times
  - Waiting for hard copy printouts

#### ◆ **Transportation**

- Movement of information, people, or materials that does not add value
  - Retrieving or storing files
  - Carrying documents to and from shared equipment
  - Taking papers/files to another person
  - Going to get signatures
  - Moving work over long distances

#### ◆ **Non-Value-Added Processing**

- Efforts that add no value from the customer's viewpoint
  - Creating unused reports
  - Repeated manual entry of data
  - Redundant reviews/approvals

- Use of outdated standard forms/templates
- Use of inappropriate software
- Data entry not performed at the source
- Information for decision-making not real time

◆ **Excess Inventory (and/or Work Waiting)**

- More information, projects, material on hand/waiting than can be worked on or the customer needs right now.
  - Files waiting to be worked on
  - Unused records in the database
  - Open projects
  - Piles and shelves of supplies
    - "Just in case"
    - Cost is lower for large volumes
  - E-mails waiting to be read
  - Voice mails waiting to be picked up
  - Requests for services piling up
  - Customers waiting for service, such as in Intake

◆ **Errors**

- Work that contains errors, becomes re-work, or lacks something necessary – errors that turn into "defects" if they reach the customer.
  - Data entry error
  - Pricing error
  - Missing information
  - Missed specifications
  - Lost records
  - Collect wrong or incorrect data
  - Equipment breakdowns/malfunctions

◆ **Excess people motion**

- Movement of people that does not add value to the service/product.
  - Searching for files
  - Extra clicks or key strokes
  - Clearing away files on the desk
  - Gathering information
  - Looking through manuals and catalogues
  - Handling paperwork

◆ **Underutilized people**

- People that are needed, but not enough work to keep busy all day – could be helping others – unbalanced workloads.
- Poor or neglected user training and user documentation on existing/new processes.
- People watching equipment work (watching while copier prints).
- People with extensive knowledge, skills, and/or experience spending time on activities that do not use these assets.

## Identifying Wastes, Applying Lean Concepts

### Step/Process Worksheet

**Purpose:** The purpose of this task is to recognize the 8 Wastes in our daily work and to apply *Lean* concepts that are effective in reducing or eliminating them.

The Eight Wastes itself is not a tool to address the problems that are causing the waste in the first place, but it is an invaluable tool in addressing inefficiencies and, as a result, also cost. It helps you to identify and organize problems so that you can focus your efforts in the appropriate areas. There are many other *Lean* tools and techniques which can be applied in order to tackle any of these wastes.

**Task:**     **Select one or more steps in your process:**

Step Name:

1. Identify the Waste(s) in your process:

2. Name the Waste(s) you see:

3. Select one or more *Lean* Concepts on the following pages to improve this step/eliminate the wastes identified:

**Using these *Lean* concepts can help you to reduce the waste in your worksite and its processes, as well as to transform your Current State to your Future State.**

### **Eliminate non-value-added activities, tasks, steps**

- Evaluate every activity, task, and step from the customer's point of view and ask if this action is adding form or function to the service. If it is not, try to eliminate as much of the non-value-added time as possible. Remember that customers can be internal, external, direct or indirect -- someone is paying for your services.

### **Implement low-cost / no-cost solutions first**

- Use simple, grass-roots level suggestions to eliminate waste. Carry out easy decisions and make low-cost decisions. This is the test phase -- you can make permanent changes later.

### **Simplify the process**

- Ask why the step or action is being done. Many times, the customer's requirements change over time, and the process is never re-evaluated to match the current needs of the customer. Applying *Lean* can be a real "up-hill battle" if key business processes are no longer appropriate or even out of date.

### **Integrate the processes or steps in the process**

- The process should be reviewed to reduce or combine steps in order to eliminate duplication, inconsistencies, conflicts, and redundancies across processes, functions, or departments.

### **Do things only once**

- For example, try to capture required data as needed and as close to the source as possible to eliminate loops (going back to source for data) in the process.
- Current States with an action, data, or information path that moves backwards should be strictly scrutinized.

### **Look at process from the customer point of view**

- At every step, determine the receiver of the generated output(s) and know the required outcome. Remember that there can be, and are, many customers within a value stream.

### **Implement visual systems**

- Visual systems are a form of communication and can be used to direct flow and identify problems/needs/status with minimal interaction from a person. Typically these can be no or low-cost solutions and can be quickly implemented to improve people, information, and documents flows. Simple signals that provide an immediate understanding of a situation or condition. They are efficient, self-regulating, and worker-managed.

### **Create value based on customer demands and needs (define the customer)**

- Perform tasks that increase the value of the service for the customer -- any thing else that is not necessary is waste.

### **Reduce batch size**

- Analyzing the amount of inventory (or work) before and after a step in the process can help identify bottlenecks or capacity constraints in the system. Only one client, case file, etc. can be addressed at a time, so question the practice of stacking or batching work and pushing batches forward to the next step in the process.

### **Improve quality – do it right the first time !**

- Strive for perfection at the source of data capture, always. People must be certain that the product/information they are passing to the next work step/area is of accepted quality.

### **Reduce transportation and/or motion**

- Analyze the amount of movement of people and documents in performing a step. Much time can be wasted in unnecessary movement.

### **Standardize the work**

- Documented, standardized work reduces cross-training time, improves efficiency, reduces searching times, and creates a work area and/or processes that produce replicable and reliable outcomes. Standardized work minimizes variation in process and process result.

### **Implement 5 S – Sort, Set in order, Shine, Standardize, Sustain**

- Sort: Eliminate the Clutter – “When in Doubt, Throw it Out”
- Set in Order: Organize and label, set boundaries and limits – “A place for everything and everything in its place”
- Shine: Clean everything, inside and out – “Inspection through cleaning”

- Standardize: Keep checklists, charts, etc. and make them visual – “Everything in a state of readiness and service”
- Sustain: Maintain discipline through the implementation of continual improvement systems and culture

### Reduce setup or changeover time

- Changeover activity is considered non-value-added and detracts from available productive time. Reducing setup is critical to increasing customer responsiveness and effectively reducing lot size.

### Implement Pull vs. Push Systems

- A Pull System is a method of controlling the flow of resources (people, information) based on pre-established rules, and the actual status of the system at any time. A Pull System is a flexible and simple method of controlling/balancing the flow of resources. It eliminates waste of handling, storage, expediting, obsolescence, rework, facilities, equipment, and excess paperwork.
- Pull System consists of:
  - Processing based on actual consumption
  - Low and well planned work in process (paperwork)
- Management by sight, improved communication
- Avoid “just in case” mentality.

### Complete small incremental changes

- Strive for transition to the Future State with incremental and monitored (measured) changes. Effective vs. ineffective changes can quickly be recognized and continuous improvement will be achieved more efficiently.

### Establish appropriate measurements to determine improvements in cost, customer service, and quality.

- Check metrics on impact of **Bend the Curve** goals
- Check metrics against project selection criteria:
  - Number of customers impacted (future state should positively impact more),
  - Intradepartmental coordination improvement (reduction of duplication or redundancy),
  - Improved service (increased capacity, better quality),
  - Dollars saved (reduced time, materials, processing),
  - Improved efficiency.

## Identifying Wastes, Applying *Lean* Concepts

### 8 Wastes - Worksite Worksheet

Complete this task by: \_\_\_\_\_

**Purpose:** The purpose of this task is to recognize the 8 Wastes in our daily work, and to apply *Lean* concepts that are effective in reducing or eliminating them.

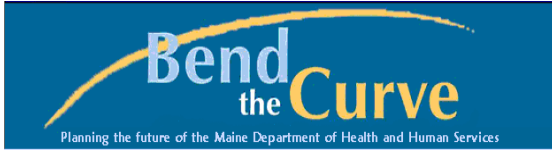
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**Method:** Divide into groups – to be specified by Facilitators

**Task:** Walk your worksite (Gemba) and on the following page -

- 1) Identify 5 forms of Waste in your worksite.
- 2) Name the waste you see.
- 3) Select one or more *Lean* concepts to improve this step/eliminate the wastes identified.





Observed Waste	Which of the '8 Wastes'?	Lean Concept(s) to Use for Improvement